

NHS Breast Screening Programme

*Annual Review* 2006



**NHS**

*Cancer Screening Programmes*



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# Foreword

The NHS Breast Screening Programme is one of our biggest success stories.

We have delivered on the promises set out in the NHS Cancer Plan; improving detection by introducing new screening techniques and extending the programme to more women.

Women continue to benefit from the introduction of two view mammography, where two views of each breast are taken at every screen rather than at just the first. Since its introduction, there has been a 40 per cent increase in the number of cancers detected by the breast screening programme.

A major expansion has seen regular invitations to breast screening extended to all women in England up to the age of 70, with routine screening available to those over 70 on request.

Vigilance against the onset of disease is one of the first lines of defence in tackling breast cancer. Breast screening is an important method of detecting abnormalities at an early stage – allowing treatment when cancer is most likely to be curable. Breast cancer remains, however, the second biggest cause of cancer deaths among women in this country which is why it continues to be one of our priorities.

We are committed to looking at ways to invest in new research and technology such as digital mammography. This will help ensure that all women eligible for breast screening can continue to access a world-class service.

Last year, 13,809 women had breast cancer detected and treated more quickly thanks to the NHS Breast Screening Programme. The Advisory Committee on Breast Cancer Screening now estimates that the programme is saving 1,400 lives per year. This is an enormous achievement, and a credit to the commitment of everyone working within the programme and our thanks go to them.



*Rosie Winterton*

Rosie Winterton MP  
Minister of State for Health Services

‘We are now inviting  
over two million women for  
breast screening each year.’

# Introduction

It has been a successful year for the NHS Breast Screening Programme. We are now inviting over two million women for breast screening each year. In addition, the comprehensive review of the programme, published earlier this year, estimates that it is saving 1,400 lives every year in England.

The review, *Screening for Breast Cancer in England: Past and Future*, was published 20 years after Ministers were first advised to introduce a national programme. It demonstrates that women who attend for screening are not only less likely to die from breast cancer, but also less likely to have a mastectomy than those who are not screened.

This year’s statistics continue to illustrate the effectiveness of routine breast screening. The features in this review reflect this and the programme’s ongoing commitment to providing a high quality service to women.

We are constantly striving to improve our programme, taking advantage of new technology for the benefit of women. Local programme input is key to moving the breast screening programme forward. We focus in this review on the Warwickshire, Solihull and Coventry breast screening service. Their expertise is helping other breast screening units deliver screening more effectively by improving the accuracy of reporting systems throughout the programme and by evaluating new technology.

The NHS Breast Screening Programme is recognised as one of the most effective in the world. It is not only women in England that have benefited. Our experience has been used by others working to set up programmes elsewhere in Europe.

Communicating effectively is an ongoing challenge for the breast screening programme and we work closely with charities, the media, celebrities and MPs to raise awareness among women. A particular challenge is that women still do not fully understand that their risk of breast cancer rises with age. Many people find it surprising that a woman’s risk continues beyond the age of routine invitation and we welcome older women into the programme.





We hope the successes of the programme will encourage more women to accept their routine invitations for screening. However, we also recognise that accessibility is just as important as the promotion of screening. We have therefore updated national guidance to ensure that the breast screening programme continues to deliver a high quality service to disabled women. The best practice advice outlines simple steps that can help ensure that women feel fully supported throughout the breast screening process.

I am delighted that this year's review recognises the huge contribution the programme is making to women's lives. This achievement is in no small part due to the commitment and dedication of those who work in the breast screening programme. My thanks go to them all.

*Julietta Patnick*

Julietta Patnick CBE  
Director, NHS Cancer Screening Programmes

'A world leader, the programme has made a huge contribution to reducing mortality from breast cancer.'

# *Making a difference*

Professor Emeritus Sir Patrick Forrest



Twenty years ago an expert committee, chaired by Professor Emeritus Sir Patrick Forrest, University of Edinburgh, recommended the introduction of a national breast screening programme to Government ministers.

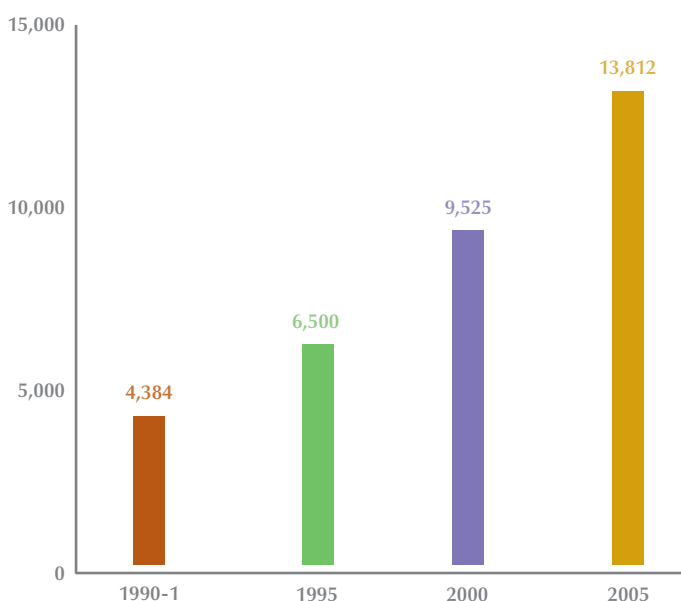
Since then, over 19 million women have been screened by the NHS Breast Screening Programme. A world leader, the programme has made a huge contribution to reducing mortality from breast cancer and is now estimated to save 1,400 lives every year in England. In addition, hundreds of thousands more women have benefited from improved outcomes resulting from the early detection of cancer.

Sir Patrick Forrest is delighted with the impact the breast screening programme has made. He said, "When we first recommended the introduction of a breast screening programme, research evidence was limited to the findings from large-scale trials in America (The Health Insurance Plan of Greater New York) and Sweden (the Two Counties Study), supplemented by two population-based studies in the Netherlands. Now, there is no doubt that the introduction of breast screening has resulted in a fall in mortality from breast cancer."

More than 110,700 women aged between 50 and 65 were invited when the first invitations were sent out in 1988. The programme was the first national programme of its kind in the world and, by 1994, all eligible women in England were being invited. Last year, more women than ever before, over 1.7 million, attended for breast screening in the UK.



Cancers detected in the UK



Sir Patrick Forrest said, “Women have also benefited from improvements to the programme. In 1986 we recommended the introduction of a programme offering skilled assessment and treatment. Since then, research and new technology have enabled it to become even more effective.

“The programme has implemented two view mammography, where two views of each breast are taken at every screen instead of at just the first, and now invites women up to the age of 70. These changes have resulted in a 40 per cent increase in the number of cancers detected since 1988. At least a proportion of these are due to the discovery of unsuspected ductal carcinoma-in-situ (DCIS) in the breast.

“In addition, the incidence of mastectomy for breast cancer has fallen. Greater use of needle core biopsy has also resulted in an increase in diagnosis, without the need for surgery or surgical biopsies. Research into the role of full field digital mammography and a better understanding of the true risk of invasive cancer in those with screen detected DCIS is being promoted.”

The programme’s work does not stop here. It remains at the forefront of commissioning new research and assessing new technologies for the benefit of women and staff.

# Timeline

*1986* – introduction of a national breast screening programme is recommended

*1988* – the world’s first national breast screening programme is set up in England

*1995* – the roll out of the programme in England is complete

*2001* – informed choice is launched. The programme explains the benefits and limitations of breast screening so that women can decide whether or not to attend

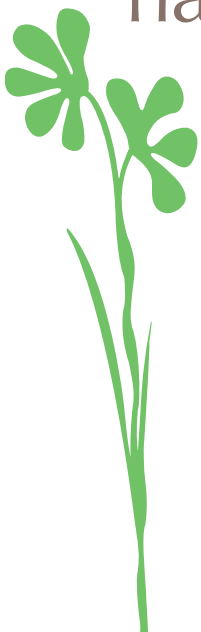
*2003* – women receive two views of the breast at every screen instead of at just the first

*2004* – the programme is extended to invite all women up to the age of 70. Women aged over 70 are strongly encouraged to make their own appointments

*2006* – evidence shows that the programme is saving 1,400 lives a year



‘Accurate and consistent reporting is crucial to maintaining a quality service at both a local and national level.’





# *Delivering benefits* through new technology

The NHS Breast Screening Programme continually monitors the latest developments in technology to enhance the quality and efficiency of its service.

Over the last ten years, Warwickshire, Solihull and Coventry's breast screening service has led the way by developing reporting systems that can be used in the planning and management of breast screening.

Margot Wheaton, Programme Manager at the unit, said, "Accessing good quality reports is essential for local breast screening units to deliver screening effectively. We began looking at developing reporting systems that would make the data held on the national breast screening computer system more accessible and user friendly. In particular, we wanted to monitor the number of women we were screening within the three year target interval."

Programme policy recommends that all women aged 50 and over should attend for breast screening every three years. The reporting system developed at the Coventry breast screening unit enabled it to undertake precise forward planning. As a result, the unit has consistently achieved the national target of screening 90 per cent of women within three years of their last mammogram. Their success led to the breast screening programme making this reporting system available to all units throughout the country.

The breast screening unit at Coventry continues to update the reporting system as national policy develops and software is upgraded. Margot said, "As technology advances we are able to build on the range of reporting functions. Part of this process is liaising with staff at screening units across the country to identify their specific requirements and ensure the software is able to produce data to meet their needs. We also provide training in using the system, helping staff to access information and use it to plan and improve the local service."

The Coventry unit is also pioneering the introduction of barcode film reading into the breast screening programme. In this, every woman is allocated a unique number which is printed as a barcode on her mammogram and linked to her computer record. Results can be entered directly into the computer by the film readers, thereby improving the accuracy of reporting.

Margot is now helping other units implement the new system. It is anticipated that the process will be complete by the end of 2006. She concluded, "Accurate and consistent reporting is crucial to maintaining a quality service at both a local and national level. It is satisfying to see the results of our continued hard work bringing benefits to every unit in the country and to the women who access them."

Margot Wheaton

‘With the NHS Breast Screening Programme leading the way, there has been a significant improvement in breast cancer prevention across Europe.’

# *A world leader*

The NHS Breast Screening Programme is acknowledged as the best in the world and its expertise has been used to develop similar programmes throughout Europe.

When the programme was introduced in England, it was the first of its kind in the world. Now many countries including Spain, France, Belgium, Luxembourg, Netherlands, Sweden, Finland and Norway routinely offer nationwide screening for breast cancer.

European breast screening programmes were developed using guidance and policies from the breast screening programme in England. Dr Chris de Wolf, a Public Health Consultant based in Switzerland, led the development of the European quality assurance guidelines in mammography screening. He said, “Expertise from the NHS Breast Screening Programme was crucial to informing the development of the guidance. We also worked closely with experts from the programme in setting up national programmes.”

Evidence based policies and formal quality assurance and reporting procedures are essential to the success of screening programmes. Dr de Wolf said, “The introduction and management of the English programme has been an exemplar. English guidelines clearly document requirements for staff and services, and policies are continuously reviewed. These practices and policies have played an important role in influencing the approach European countries have taken to introducing breast screening.”

The NHS Breast Screening Programme’s close links with European programmes mean expertise, new research, technology and successful initiatives continue to be shared.



Dr Chris de Wolf

“The English programme places great emphasis on the education of women, encouraging them to make informed choices about attending for regular breast screening. Looking to the future, we are keen for European screening programmes to incorporate elements of the NHS Breast Screening Programme’s education initiatives. It is important women fully understand breast screening before they decide whether or not to attend for their appointments,” said Dr de Wolf.

With the NHS Breast Screening Programme leading the way, there has been a significant improvement in breast cancer prevention across Europe. Dr de Wolf said, “It is encouraging to see so many women benefiting from this life-saving service. When we began developing European quality assurance guidelines, we never expected that the implementation of screening programmes in Europe would be so successful. This is a major achievement and the experience of the NHS Breast Screening Programme has played an important role in the process.”



'The guidance helps units to identify barriers that prevent women from accessing the service.'

## *Equal access* to screening

The NHS Breast Screening Programme continuously reviews its policies and guidance to meet the health needs of society. New national guidance, *Equal Access to Breast and Cervical Screening for Disabled Women*, was published this year to ensure that the breast screening programme delivers a high quality service to disabled women. It updates previous guidance published in 2000.

Ali Guest, NHS Breast Screening Programme Quality Assurance Radiographer in the North West of England, led the development of the guidance. She said, "The new guidance outlines best practice and is designed to improve access to breast screening for disabled women. It also conforms with the October 2004 requirements of the Disability Discrimination Act.

"The guidance helps units to identify barriers that prevent women from accessing the service. It also makes recommendations about how breast screening units can make reasonable adjustments to remove or reduce the barriers wherever possible. For example, including a fax number on invitation letters provides an alternative method by which women who are deaf, and cannot use a telephone, can contact breast screening units independently about changing their appointments."

The new publication also describes simple steps that can improve accessibility. Considerations include offering appointments at static units, where there is more space, and allocating longer appointment times to women with disabilities should they require them.

The guidance also recommends that invitations and leaflets are always available in large print or picture form. This helps women with impaired vision or learning disabilities access balanced information on the benefits and limitations of breast screening.

In addition to accessibility, the issue of consent is central to any screening programme and so the equal access guidance addresses appropriate ways of obtaining consent from learning disabled women.





Ali Guest

Nicola Smith, Co-National Director for Learning Disabilities at the Department of Health, believes that understanding how learning disabled women experience breast screening is key to providing a good service. She said, "When staff have an awareness of the needs of disabled women, they are better placed to offer the right kind of support. This might be simply talking women through the process step by step. Specific materials, like the breast screening programme's facts booklet in picture form, are also really useful in explaining breast screening."

By reviewing its policies and developing guidance to meet women's individual needs, the NHS Breast Screening Programme demonstrates its commitment to offering all women the best possible service.

'Understanding risk is important because it is a key factor in motivating women.'

# *Understanding risk*

The incidence of breast cancer increases with age and around 80 per cent of cases occur in women aged over 50. Despite this, research carried out by the NHS Breast Screening Programme shows that just two per cent of women aged between 40 and 80 are aware that older women are at increased risk.

For over 15 years, Professor Amanda Ramirez, Director of Cancer Research UK's London Psychosocial Group, has been conducting research into the factors that affect a woman's presentation with breast cancer. She said, "Many women are worryingly uninformed about their risk of breast cancer. Understanding risk is important because it is a key factor in motivating women to be breast aware, attend for routine screening and seek help early if they discover a breast change. Older women are not only less likely to be aware that they are at greater risk, but are also more likely than younger ones to delay going to their GP if they have symptoms."

Professor Ramirez began a research project in 2005 aimed at improving women's understanding of breast cancer risk and symptoms and thereby encouraging their early presentation if they discover a breast change. She said, "We are currently running a trial in conjunction with the South East London Breast Screening Service. Women attending for their last routine breast screening are given an additional ten minute interview with a trained radiographer. Staff discuss risk and the symptoms of breast cancer and women are encouraged to continue to attend for routine screening. The most important message is that women should not delay going to their GP if they notice any specific changes to their breasts. If the trial is successful in improving breast awareness, we hope to begin a large multi-centred trial to see if the intervention can actually reduce delayed presentation with breast cancer."





Professor Amanda Ramirez

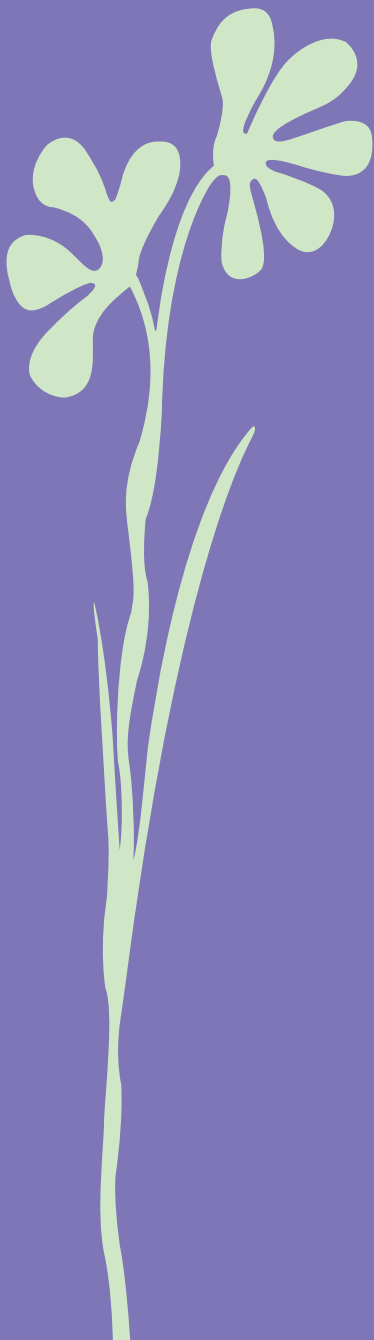
The way that women with breast cancer are represented in the media can create further barriers to understanding risk. Pamela Goldberg, Chief Executive of Breast Cancer Campaign, said, “Breast cancer is too often seen as a disease affecting young, white women because those are the images seen in the media. It is important that women from all ethnic groups and over the age of 50 – the age group most at risk from the disease – are also portrayed.”

The breast screening programme works closely with breast cancer charities and the media to educate women about the risk of breast cancer and the importance of attending for screening. Posters, endorsements from MPs and celebrities, the screening programme’s website and materials produced for GPs are all used to inform women and encourage them to attend. Every woman invited for screening is sent a leaflet entitled, ‘*Breast screening – the facts*’ which highlights the risks of breast cancer as well as explaining the benefits and limitations of screening.

In 2004, the upper age limit for routine screening was raised to 70. Since then, the number of women aged over 65 who attend for screening has doubled. Professor Ian Philp, National Director for Older People’s Services, Department of Health, said, “Extending the programme to older women has been crucial in reaching women with an increased risk of breast cancer. It also helps to raise awareness of the fact that it is older rather than younger women who are most at risk.”

The breast screening programme continues to work closely with researchers and the wider community to inform women of breast cancer risk and the importance of attending for screening. By doing so, it is able to detect more cancers than ever before and make a real difference to women’s lives and health.

# Introduction to the *Statistics*



The following tables present the combined results of the UK breast screening programmes for the year April 2004 to March 2005. It was the first year to show the full effect of screening women aged 65 to 70 in addition to 50 to 64 year olds. The effect of this can be seen in many of the tables and the difference that the age of women makes is highlighted.

While UK breast screening is recognised across the world as being of the highest quality, it is disappointing that acceptance of screening invitations appears to have dropped slightly. This is a trend seen in all areas and age groups. Nevertheless, the quality of screening is being maintained and local breast screening units make every effort to ensure their services are welcoming and accessible to all women.

The data in these tables are produced by local screening offices, assisted by their regional quality assurance reference centres and the Cancer Screening Evaluation Unit. Most are statistics collected routinely with information on treatment coming from an audit carried out in conjunction with the Association of Breast Surgeons at BASO. All of us involved in the breast screening programme benefit from this effort as it helps us to do the best job we can, and so bring the biggest benefit to the women of the UK.

**Table 1: Screening activity – women aged 50+**

This year, the UK breast screening programmes invited over two million women for the first time. Almost three quarters of them accepted their invitations and nearly 14,000 cancers were found, most of which were less than 15mm in diameter or had not yet invaded surrounding tissue. Although it was disappointing to see a slight drop (0.6%) in acceptance, the programmes' continued improvement in specificity (the ability to detect only true cases of cancer) was very pleasing. This is demonstrated by a drop in the assessment rate while the standardised detection rate stayed about the same.

	2003/04	2004/05
Total number of women invited	1,998,989	2,074,572
Acceptance rate (women aged 50 - 70 invited)	75.2%	74.6%
Number of women screened (invitation)	1,505,330	1,584,695
Number of women screened (self/GP referral)	142,111	129,202
Total number of women screened	1,647,441	1,713,897
Number of women recalled for assessment	84,225	83,028
% women recalled for assessment	5.6	4.8
Number of benign biopsies	1,790	1,792
Number of cancers detected	13,064	13,812
Number of in situ cancers detected	2,756	2,872
Number of invasive cancers less than 15mm	5,420	5,784
Standardised detection ratio (invited women 50 – 70 only)	1.41	1.40

**Table 2: Acceptance by age – all invitation types**

Here the acceptance rate is analysed in greater detail. The drop in acceptance can be seen across all age groups, except the early 60s where it remains about the same. Invited women aged 71 or over are too few in number for any conclusions to be drawn.

Age	50 – 54	55 – 59	60 – 64	65 – 70	71+
2003/4	75.4%	76.2%	74.9%	71.9%	71.4%
2004/5	74.8%	75.6%	75.1%	70.9%	79.0%*

\* Fewer than 2,000 women

**Table 3: Acceptance by type of screen (women aged 50 – 70)**

In this table, acceptance rates are analysed by type of invitation and once again a slight drop can be seen in all major categories. The exception is women on short term recall, but the numbers are too small for any conclusions to be drawn.

	2003/04	2004/05
1st invitation	72.4%	70.9%
1st screen, previously non-attenders	20.3%	19.5%
Acceptance for routine re-screening	84.8%	83.9%
Acceptance for short-term recall	97.2%	97.3%*

\* Fewer than 3,000 women

**Table 4: Screening quality – first screen following first invitation**

This table presents data on women who are just entering the programme. They are mostly aged 50, 51 or 52 and have been screened following their first invitation. All quality standards for these women have been met and exceeded.

	Standard (50 – 64)	Achieved (50 – 64)
Acceptance rate	>70%	71.5%
Recall rate	<10%	8.4%
Benign biopsies (per 1,000 women screened)	<3.6	2.0
In situ rate (per 1,000 women screened)	>0.4	2.0 *
Invasive cancer rate (per 1,000 women screened)	<2.7	5.2
Invasive cancers less than 15mm (per 1,000 women screened)	>1.5	2.5
Non-operative diagnosis rate for cancers	>80%	80.5% *
Total number of women screened for the first time following their first invitation	–	256,599
Standardised detection ratio	>1.0	1.41 **

\* Includes previous non-attenders

\*\* women aged 50 - 70



**Table 5: Screening quality – subsequent screen**

The women represented in this table are those who are returning for routine re-screening. Data are only shown for women aged 50 to 64, as those aged 65 to 70 have often had long intervals since their last screen and so have different characteristics. The longer interval is due to the fact that routine invitations used to cease at 64, and women aged 65 to 70 were only invited back into the programme from 2004. In order to judge quality standards, the standard screening interval has been used, and this shows that all standards have been met and exceeded.

	Standard (50 – 64)	Achieved (50 – 64)
Acceptance rate	–	81.5%
Recall rate	<7%	3.7%
Benign biopsies (per 1,000 women screened)	<2.0	1.0
In situ rate (per 1,000 women screened)	>0.5	1.4
Invasive cancer rate (per 1,000 women screened)	>1.65	5.5
Invasive cancers less than 15mm (per 1,000 women screened)	>1.7	3.0
Non-operative diagnosis rate for cancers	>80%	86.8%
Total number of women screened following routine reinvitation	–	1,078,981
Standardised detection ratio	>1.0	1.40**

\*\* women aged 50 - 70

**Table 6: Women aged 65 and over**

More than a quarter of a million women over 65 are now screened in the UK. Women aged 65 to 70 are usually invited and those 71 or over are screened on request. The cancer detection rates in these women are strikingly similar in each year.

		2003/04	2004/05
Total women screened	65 – 70	201,029	256,014
	71+	43,037	46,086
Invasive cancers detected	65 – 70	1902 9.5 per 1,000	2425 9.5 per 1,000
	71+	550 12.8 per 1,000	592 12.8 per 1,000
In situ cancers detected	65 – 70	437 2.2 per 1,000	501 2.0 per 1,000
	71+	122 2.8 per 1,000	130 2.8 per 1,000

**Table 7: Analysis of women aged 50 – 64 compared with 50 – 70**

This table compares outcomes in the two age groups for invited and self-referred women. In both categories, the age group which includes older women has a higher rate of invasive cancer. This reflects their increased risk. It has also long been known that women in the screening age group who refer themselves are more likely to have breast cancer, a fact illustrated once again in this table.

	50 – 64	50 – 70
Acceptance rate	75.2%	74.6%
<b>Outcome of routine re-screening</b>		
Recall for assessment	3.7%	3.8%
In situ rate (per 1,000 women screened)	1.4	1.5
Invasive cancer rate (per 1,000 women screened)	5.5	6.0
Benign biopsies (per 1,000 women screened)	1.0	1.0
Non-operative diagnosis	86.8%	86.5%
<b>Outcome of self-referral appointments</b>		
Recall for assessments	6.3%	5.4%
In situ rate (per 1,000 women screened)	2.0	2.0
Invasive cancer rate (per 1,000 women screened)	7.4	9.7
Benign biopsies (per 1,000 women screened)	1.0	1.0
Non-operative diagnosis	83.8%	88.3%

**Table 8: Treatment of screen detected breast cancer**

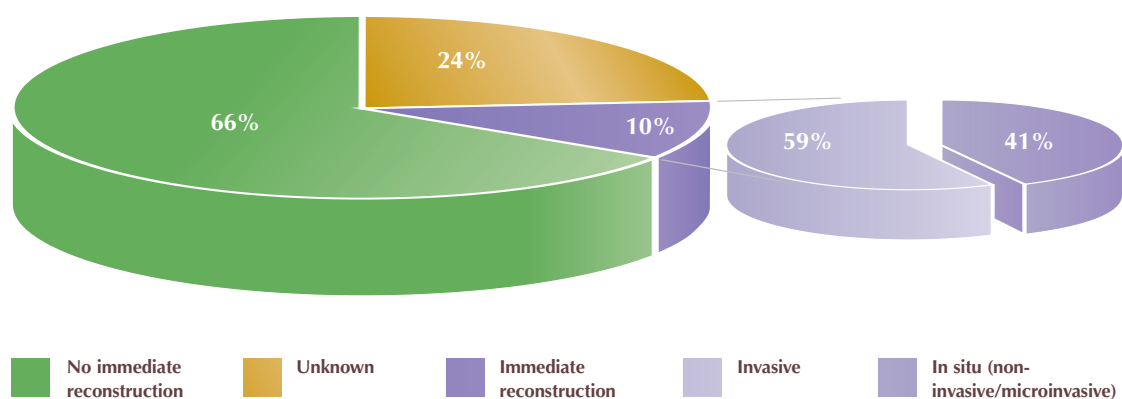
Most screen detected breast cancers are treated by 'lumpectomy', where the breast is conserved, rather than by mastectomy where the breast is removed. The treatment rates are similar whether the disease is in situ or invasive since treatment choice will be influenced by the proportion of the breast affected rather than by the stage of development of the cancer.

	Conservation	Mastectomy	No Surgery
In situ (non-invasive and microinvasive)	70%	29%	1%
Invasive	71%	27%	1%



### Table 9: Immediate reconstruction after mastectomy

Ten per cent of women who have a mastectomy now undergo immediate reconstruction of the breast. Techniques to achieve this include implants and using tissue from elsewhere on a woman's body.



### Table 10: Total screening activity – all ages

This table shows complete information for all women screened by the UK programmes. The 65 to 70 age group is shown separately since many of them had more than three years between screens. The screening programmes only began inviting women in this age group in 2004.

				Cancers detected				
		Recalled for assessment		Total		In situ and microinvasive	Invasive	<15mm (<10mm)
Age group	No. of women screened	% of women screened	No. of women	No. per 1,000 women screened	No. of cancers detected	No. per 1,000 women screened	No. per 1,000 women screened	No. per 1,000 women screened
Under 50	35,288	8.0	2,809	6.5	230	2.0	4.5	2.3 (1.2)
50 – 64	1,411,797	4.9	68,941	7.2	10,137	2.0	5.5	3.0 (1.4)
65 – 70	256,014	4.5	11,617	11.5	2,949	2.0	9.5	5.0 (2.2)
71 or over	46,086	5.4	2,470	15.8	726	3.0	12.8	7.0 (3.2)
Total (all ages)	1,749,185	4.9	85,837	8.0	14,042	2.0	6.0	3.4 (1.6)

## Regional data

Tables 11 to 14 present data for each region including standardised detection ratios (SDRs). SDRs are around the same as last year and are higher in the 50 to 70 age group than in those aged 50 to 64. This may be partly because it is easier to diagnose cancer in older women who have a higher proportion of fat in their breasts. A second reason might be because many older women have had an interval of more than three years since they were last screened. It will take approximately three years, or one screening round, for this to work its way through the population.

**Table 11: Outcome of prevalent (first) screens by region – women aged 50 – 70**

Region	Acceptance % of invited	Referral % of screened	Benign biopsy % of screened	Non-operative diagnosis % of screened	Invasive cancer detection rate per 1,000 screened
North East, Yorkshire & Humber	74.5	7.1	0.23	88.7	5.2
East Midlands	77.7	8.0	0.17	88.5	4.9
West Midlands	72.2	7.5	0.16	93.3	4.7
North West	69.5	8.3	0.21	90.0	5.0
East of England	72.5	8.9	0.26	87.5	5.7
London	55.4	8.0	0.16	89.1	5.4
South East	72.5	8.5	0.22	90.8	5.3
South West	72.3	9.6	0.27	89.0	5.9
Scotland*	75.5	10.3	0.24	–	5.2
Wales	72.7	7.7	0.17	85.4	5.1
Northern Ireland	73.3	7.5	0.21	93.3	4.5

\* Data omitted where not comparable

**Table 12: Outcome of incident (subsequent) screens by region – women aged 50 – 70**

Region	Acceptance % of invited	Referral % of screened	Benign biopsy % of screened	Non-operative diagnosis % of cancers	Invasive cancer detection rate per 1,000 screened
North East, Yorkshire & Humber	84.5	3.3	0.08	94.5	6.0
East Midlands	86.5	3.7	0.07	96.0	6.2
West Midlands	84.2	3.5	0.06	95.3	6.1
North West	83.3	3.7	0.08	93.0	5.7
East of England	84.6	4.2	0.09	93.9	6.5
London	76.0	3.4	0.07	94.1	5.7
South East	84.7	3.7	0.08	92.6	5.8
South West	85.3	4.6	0.09	91.7	6.5
Scotland*	84.7	4.2	0.07	–	5.7
Wales	84.7	4.0	0.08	96.5	6.2
Northern Ireland	86.1	3.1	0.06	95.3	5.5

\* Data omitted where not comparable



**Table 13: Outcome of self/GP referrals by region – women aged 50 – 70**

Region	Referral % screened	Benign biopsy % screened	Non-operative diagnosis % of cancers	Invasive cancer detection rate per 1,000 screened
North East, Yorkshire & Humber	4.7	0.04	94.4	9.9
East Midlands	5.4	0.08	98.0	7.8
West Midlands	4.6	0.08	91.0	9.1
North West	5.7	0.17	95.5	11.0
East of England	5.5	0.13	95.7	10.0
London	5.4	0.17	93.9	9.1
South East	5.5	0.15	93.3	10.8
South West	6.3	0.14	94.7	9.9
Scotland*	5.9	0.06	–	7.9
Wales	4.5	0.13	97.0	9.3
Northern Ireland	5.9	0.15	93.8	11.1

\* Data omitted where not comparable

**Table 14: Standardised detection ratio (SDR) by region – women aged 50 – 70**

Region	Prevalent	Subsequent (incident)	Overall
North East, Yorkshire & Humber	1.37	1.41	1.40
East Midlands	1.27	1.50	1.46
West Midlands	1.32	1.43	1.41
North West	1.43	1.28	1.31
East of England	1.53	1.45	1.47
London	1.38	1.34	1.35
South East	1.50	1.39	1.42
South West	1.49	1.52	1.51
Scotland	1.34	1.29	1.30
Wales	1.50	1.50	1.50
Northern Ireland	1.16	1.35	1.30
Total/(Total previous year)	1.41 (1.38)	1.40 (1.42)	1.40 (1.41)



## *Cancer Screening Programmes*

### NHS Breast Screening Programme

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